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The JOURNAL *of* GEOGRAPHY

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Mr. Stotz is a graduate of the College of the City of Detroit and is working on his doctorate thesis to be presented at Clark University. He is head of the department of geography at Robert College, Istanbul, Turkey, where he is now spending his second year. He has traveled over most of Europe and Asia Minor, and has done extensive field work in Anatolia, Greece and Italy. His article is the twenty-first in our series on human geography.

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Miss Kopf is Director of Research in the Public Schools, Piqua, Ohio. She has conducted research studies in Methods of Instruction, Careers of High School Honor Graduates, Social Science, and Vocational Guidance in the Junior High School.

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INSPIRING WORDS

From an address by

ALBERT PERRY BRIGHAM, *A.M., Sc.D., L H.D., LL.D.*

Late Honorary Consultant in Geography, Library of Congress
Co-Author of "Essentials of Geography"

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VOLUME XXXI MAY, 1932 NUMBER 5

LIFE IN THE COMMUNITIES ALONG THE BOSPHORUS

CARL L. STOTZ
Robert College
Istanbul, Turkey

The communities which line the Bosphorus present within their immediate compass an interesting study of man's adjustment to a complex environment. The mighty sea-river is at once a great international lane of trade, a boundary line between two continents, a source of wealth as a fishing site, a path for climatic disturbances, and a stimulating bit of nature's handiwork.

It extends for eighteen miles thru Turkish lands, between the high hill-walls of its rift valley, and connects the Black Sea, on the north, with the Sea of Marmara on the south. Its course, tho irregular, is wide, but its currents are swift and it forms the only outlet for the commerce of the entire Black Sea basin. These important factors have naturally influenced man to a great extent as he built his cities and villages in the region.

INFLUENCES OF ISTANBUL

Perhaps the most important settlements along the Bosphorus are those founded on the commerce and shipping which after all is the chief industry of the place. Altho many things may be said about the Bosphorus, it is impossible to overstress the value of this maritime river as a lane of trade. The entire cereal producing steppe land of Russia, the oil fields of the Caspian Sea depression, and the timber- and tobacco-producing region on the south shores of the Black Sea all depend on the Bosphorus as an outlet to the world's markets.

Then too, since early times, it has been necessary for all overland traffic between Europe and Asia going in either direction, to halt on the shores of the Bosphorus and be ferried across. Due

to the width and the great depth of the strait, it has been impossible, up to this time, to erect a bridge connecting the two continents. Thus we see that not only is the Bosphorus a lane of trade but it creates a focal point of overland trade which in turn creates a cross-roads focal point of world commerce.

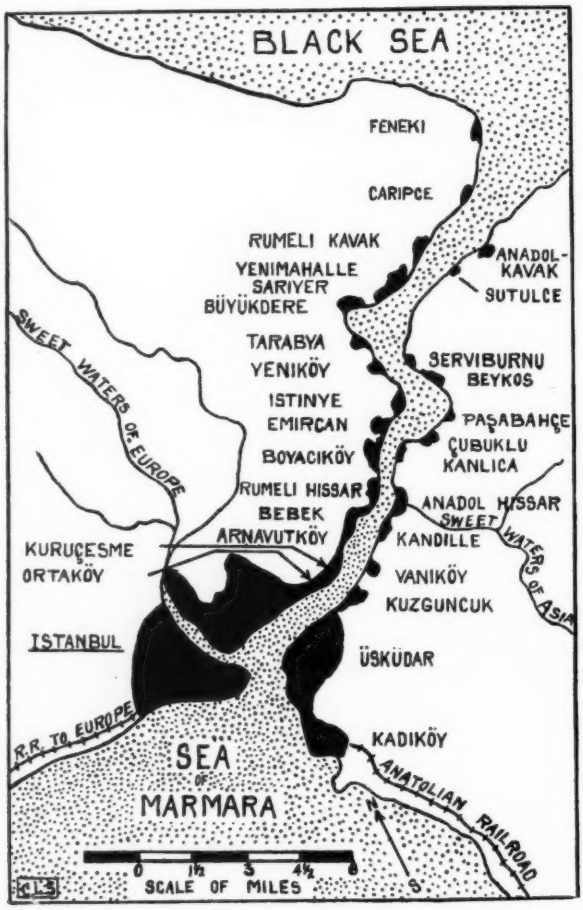

FIG. 1. Sketch map of the Bosphorus region.

Man has been quick to take advantage of these natural factors. More than six centuries before the birth of Christ (657 B.C.), man started to build a city on the shores of the Bosphorus. It was originally intended as a fishing village but its location on the cross-roads of commerce, at the junction of the Bosphorus and the Golden Horn, at a point where the two water bodies empty into the Sea of Marmara, gave it control over the whole waterway system. The city soon grew to be an important commercial center. It is known today as Istanbul (Constantinople) and so fine is its location that for ages it has been the object of conquest on the part of many a European monarch.

Istanbul has a wonderful harbor formed by the junction of two drowned river systems. Its deep waters, which are protected by the hills on which the city is built, attract ships from every nation and 94 per cent of the city's people find occupation in some form of commercial enterprise. The city holds the key to the Bos-

phorus and hence to the commerce of the Black Sea, and its location at the extreme southern end of the sea-river makes of it a fine trans-shipping point for bi-continental cargoes.

URBAN COMMERCIAL COMMUNITIES

The commercial activities of the great city affect the surrounding area for some distance in all directions, and give rise to a series of Bosphorus villages, the inhabitants of which are directly dependent upon the city's business for their existence. These villages are located on both sides of the Bosphorus but are especially concentrated on the western shore.

FIG. 2. One of the larger boats which carry freight from village to village along the Bosphorus.

These villages include Ortaköy, Kuruchesme, Arnavutköy, and Bebek on the western side and Usküdar (Scutari) on the eastern side. Usküdar is affected only because it serves as the terminus of the Anatolian railroad system which leads into Syria and the countries to the south. The village has grown up around the trans-shipping business and the consequent railroad enterprise. It is a modern Turkish village built on the hills extending from the water's edge to the hilltops. It has few shops and business establishments, its people doing most of their buying in Istanbul.

The western shore villages are of quite a different character. They serve both as residence quarters for the workers and as business sites for many small shops. The hills which form the valley-walls of the Bosphorus rise abruptly from the water on both shores, but their abruptness is accentuated by outcrops of rock materials on the western side. The villages are built on these slopes, the houses towering one above the other as they reach up the

slopes to the hilltops. The land immediately adjoining the quay is given over to warehouses and buildings of commerce. A sort of river-road extends all the way along the Bosphorus from the city to Boyaciköy where it turns inland over the hills for a short distance only to return to its shore position again at Istinye. The land between the water and this roadway, as far north as Bebek is occupied mostly by warehouses, but a few palaces still exist as such and several schools have erected their buildings in this area, because of the wonderful view over the Bosphorus.

During the days of the Sultans this ground was given over to the homes, gardens, and harem buildings of government officials and princes of the House of Othman. But since the coming of the new republican form of government, these properties have been confiscated and used for business purposes.[1] Many of the beautiful old palaces are today used as storage places for tobacco, grain, fuel and other materials.

Immediately inland from this row of old palace-warehouses is the main street or river-road, narrow in places, wide in places, but paved all the way with heavy cobblestones. It is flanked on either side, as far as Beshitashe, which is midway between Ortaköy and Arnavutköy, with small shops of every nature. Meat markets, vegetable shops, candy stores, grocery shops, dry goods establishments, and hardware stores all display their wares in a typically oriental fashion by placing them out on the sidewalks and even in the streets. The shop fronts are always open and give more the appearance of booths than of shops. Between Beshitashe and Arnavutköy the street is but an aisle between high stone walls, which on the sea side serves to hide from public view coal yards and other commercial depots, while on the land side they serve as retaining walls, preventing small landslides.

On the hillsides are the houses. Some of them are large, some are small, but almost all of them are made of wood and are sadly in need of paint. They have a large number of windows, most of which are covered over with fine wooden lattice screens which permit light and air to enter the rooms but prevent anyone from looking into the apartment—a hangover from the days of the harems. The houses have no basements and are not equipped with central heating devices. Many of them have stoves, the pipes of which may

[1] Except the former Sultan's palace at Dolma Batche which is maintained as the Istanbul residence of the President of the Republic, and several lesser palaces belonging to Egyptian royalty.

be seen extending from windows and walls, forming a most confusing pattern. Some of the houses do not have stoves, however, and the heating is done by means of a mongol, a small copper bowl in which charcoal is burned. The mongol is used quite widely thruout the line of villages for cooking purposes. The interiors are for the most part plain and orderly. Decorations are few in most of

FIG. 3. Istanbul—"The Pearl of the East"—showing the Golden Horn on the left, the Galata bridge and then the Bosphorus which extends to the right and into the background of the picture. Note the ships along the quay on the far side or Pera side of the Horn, as well as the ships at anchor in the harbor. Photographed from the Stamboul fire-tower.

the houses but tend toward the gaudy, being made of bright colored material. A few homes, of the better class people, are crowded with ornaments of all kinds and colors, but the ordinary native worker is far too poor to permit such luxuries in his home.

The main street which parallels the water has a tram line and is the only street capable of carrying motor traffic in these villages. The hillsides on which the houses are built are so steep that the streets, of necessity, are nothing more than a long series of narrow stone steps. Donkeys and mules are common means of transportation and they are able to tread their way over the rough stones with a certain degree of slow efficiency. At convenient points along the streets, fountains have been placed and are usually crowded

with women carrying water jugs and cans, for the great majority of the houses are without running water and water for all purposes must be carried from the public fountains. These fountains are often spring-fed or get their water from drainage areas in the hills. In the summer months, during the drought season, many of them fail to provide water for the people and then water is often brought long distances from springs near the Black Sea or far up the Bosphorus. In former days the fountains were beautifully decorated and formed a fine part of the city's property, but today they are in a sad state of decay and usually consist merely of a pipe from which the water trickles. Sometimes one finds a brass faucet, but the beauty of the fountains belongs to yesterday. Such are the villages between Istanbul and Bebek. At this latter village the carline ends and the villages to the north are vastly different in character.

Suburban Communities

Beginning at Bebek, suburban influences begin to mold the nature of the villages and the character of the people's work. From here northward the villages are smaller and the people depend upon agricultural activities or upon the fishing industry for their livelihoods.

The most striking difference between this suburban region and the urban region to the south is that the villages are farther apart and usually occupy the central positions of small drainage basins whose tiny intermittent streams empty into the Bosphorus. Between the villages are either open hills or the fine landed estates of wealthy residents.

The eastern side of the Bosphorus is by far the least prosperous. It shelters fewer villages and its large estates are smaller and less numerous. This is undoubtedly due to the fact that it is more isolated from the large city area. However, the suburban villages, whether on the east or the west shore, have a common bond in that the people are all engaged in either fishing or agriculture. The only difference between the two sides is that the western side is directly connected with the city area and has a larger and more prosperous population than the isolated eastern shore.

The villages, which include Boyaciköy, Emircan, Istinye, Yeniköy, Tarabya, Büyükdere, Sariyer, Yenimahalle, Rumeli Kavak, and Caripce on the western side, and Kuzuguncuk, Chenchelköy, Vaniköy, Kandilli, Anadolu Hissar, Kanlica, Chubuklu, Pashabatche, Beykoz, Serviburnu, Sutluce, and Anadolu Kavak on the

eastern side, are rural communities and depend on the gifts of nature for their success and progress. Approximately three-fourths of the people in these villages are dependent upon the fishing industry. But two exceptions exist, the village of Rumeli Hissar which is composed mostly of persons connected in some manner with Robert College, an American School, and the village of Istinye which is the site of summer embassies, a very popular and flourishing place before the government was moved to Ankara. But even these two exceptions have their small fishing interests.

FIG. 4. All along the Bosphorus are seen the native fishermen. Banded together in small groups they ply their trade singing as they pull in the nets. Usually one man is elected to set the pitch and meter of the song and he does not touch the nets.

All along the shores nets are set and men take turns at sitting on a high pole perched over the nets. They sit there day and night and watch the run of the fish. When the nets are full they call to their companions who in the meantime have been enjoying themselves in the local coffee house. The men assemble and the nets are pulled in. The catch is usually a good one and contains such small fish as mullet and mackerel. Other forms of fishing are also practiced. Nets are set at right angles to the shore and are stretched far out into the Bosphorus, so far indeed that men are stationed in small boats amid stream to guard the nets. They call to the helmsmen of passing ships and their weird calls may be heard day and night as they tell the man at the wheel to turn to the right or to the left. These nets are set to catch swordfish which come down from the Black Sea. Sardines also form an important source of revenue. They are caught at night. Small boats go out on the water carrying behind them a pile of burning bushes and brush material extended on a metal frame made for the purpose. The light of the burning wood attracts the fish and they are lured into the nets by it. All fish caught are placed in large baskets and taken to Istanbul where a government tax is placed upon them. This paid, they are sent to various markets

both in town and in the villages. For protection and profit the fishermen are banded together in small organizations not unlike cooperative societies.

The remaining one-fourth of the people are engaged in agriculture but it is not a very profitable business. The land in this section is rocky and of an unfertile nature. Only occasionally does one find a remnant of uneroded chestnut brown soil where crops will grow and produce. The long season of drought during the summer months is also an obstacle in the way of the Bosphorus farmer. However, the valley bottoms whether they be watered by a small stream, a spring, or by local drainage, are used for crops of the truck-garden variety.

Beans, egg-plant, peas, melons, and some root crops such as potatoes, carrots, onions, and beets are grown. The fields are plowed carefully and the crops planted in the early spring so that the rains will help the small plants to grow and become strong before the drought sets in. During the summer months when the crops are maturing and ripening, the fields are watered by irrigation. A well is usually dug on the premises and a waterwheel constructed. A blindfolded horse or team of horses treads its weary way around and around in a never ending circle, bringing the water to the surface level from where it is directed out over the fields in small ditches.

The nation as a whole is poor, and food stuffs have to be sold at low prices. Beautiful wax beans sold for two and one-half piasters an oke (1¼ cents for 2.2 lbs.) this year, which really doesn't leave much profit for the farmer. However, the people are fatalistic and as long as they have food to eat and a few clothes to wear they do not complain. They work long hours and receive little remuneration for their efforts, but they are happy, kind and hospitable to strangers.

Social Life in the Villages

The social life of the villages, urban and suburban alike, centers around the village coffee house. There the men gather after the day's work is done or between jobs during the day for a chat and a cup of very sweet Turkish coffee. There is little home life. Home is a place in which to eat and sleep, nothing more. The coffee house is a place in which to enjoy one's spare moments. In front of the coffee house the nets of fishermen are repaired, beside it they are dried, inside everything from local crops to international politics

is discussed between sips of hot coffee. The coffee house is a sort of village club where men gather for discussions, card games, and other forms of recreation.

There is little or no social life for the women. They are content to find some comfortable place where they can squat down on their heels and just sit, looking out over the blue waters of the Bos-

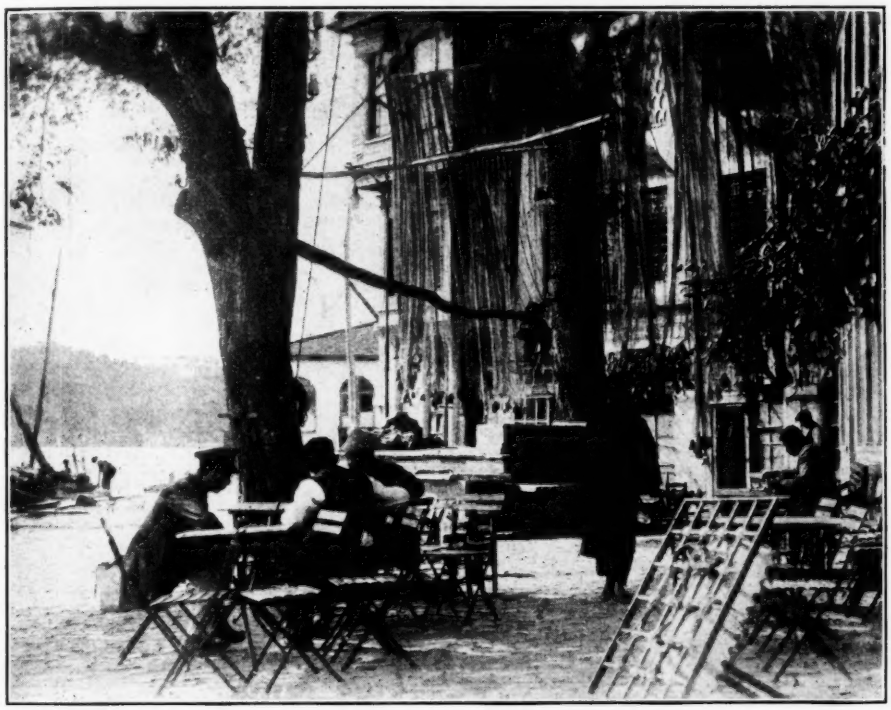

FIG. 5. The Coffee House forms the center of the social life of each Bosphorus village. Men gather there to chat and sip coffee, nets are dried and repaired there and discussions fill the air.

phorus. At times they gather in small groups and carry on their own conversations but they never enter the coffee houses.

The Turks are great lovers of food and the out-of-doors. On Fridays many of them pack up a lunch and take a small boat called a *caique*. They ride on the water for a time and then select a quiet place on the banks where they can eat their meal and enjoy the fresh air. In the warm weather they enjoy a swim before their meal. The excellent system of ferryboats that ply the waters of the Bosphorus and form the only means of communication and

transportation for the villagers are pressed into service on Fridays by holiday parties who enjoy riding from one end of the Bosphorus to the other and perhaps having a meal on board.

The bright blue waters of the sea-river, together with the fresh breezes which come down from the Black Sea, and the green and brown hills which flank either side, present a beautiful picture which is enhanced only by the picturesque villages with their small

FIG. 6. The mosque at Dolma Batche stands on the water's edge. On the left and toward the background stands the famous Palace of Dolma Batche, former palace of the sultans, and now the Istanbul residence of the President of the Republic of Turkey.

boats, their fishing nets, and their tall minarets. The lovely old palaces, many of them now in ruins, with their fine gardens and beautiful grounds, make excellent picnic places and add charm and beauty to the environment. The scenes along the Bosphorus have long been the source of tourist admiration and they are not unappreciated by the Turks themselves.

RELIGIOUS LIFE IN THE VILLAGES

The minarets of the mosques of Istanbul stand out high against the skyline, beautiful symbols of a great religion. There are many

mosques in the city proper and each village has at least one mosque, often more. According to the rules of the Islamic religion, there must be a mosque for every sixty people.

Unfortunately, one of the results of the great social revolution which has swept the country in recent years and is still in progress, has been a falling off of religious interest. It is only to be expected that a people so rich in old tradition and custom as the Turks would find it difficult to adjust to a new and entirely different order of things. Religion has been one of the things that has suffered in the changing process. It is to be hoped that the people will soon seek out again their religious customs and carry them on even tho in a modified form; but, that time is not yet, and today many of the mosques both in the city and in the villages are empty most of the time.

There are a few non-Islamic churches in the villages and in Istanbul, but they function under difficulty and form an unimportant part of religious life today as far as the villagers are concerned.

TRANSPORTATION IN THE VILLAGES

While the commercial urban villages are connected with the city by an efficient street car service reinforced by local bus lines, the suburban villages are mostly dependent upon water transportation. A fine ferryboat system is in operation during the whole year and the boats touch at every village along the Bosphorus. The service is efficient, for the boats move swiftly and the fares are small. Many of the boats are express carriers, stopping at every village in the suburban region, making their last stop at Rumeli Hissar, and then going directly in to town.

The ferries offer a fine means of passenger travel but they carry little freight. The agricultural products and other materials going to and from the villages are carried in small boats propelled by oars or sails. Still smaller boats (*caiques*) are used for freight and short distance passenger travel, and give occupation to a group of men known as Bosphorus boatmen.

Overland communication and transportation is slow and inefficient. Most of it is done on muleback or by donkeys. Much of it is done on foot, also, for the cost of motor travel, due to high customs tariff on automobiles and the bad condition of the roads, is almost prohibitive. However, while the Bosphorus is considered by some a barrier, it is rightfully regarded by the villagers as a means of communication which serves them well.

FUTURE OF THE VILLAGES

That the Bosphorus will continue to be a great avenue of trade and a natural boundary between two continents cannot be doubted. And as long as commerce passes along this waterway, the city of Istanbul will prosper. But the prosperity of the city is not entirely dependent upon water traffic. It is a crossroad city and is interested in inland traffic as well. Under the present plan being carried out by the Turkish government for the development of the Anatolian railroads, Istanbul will receive even more overland traffic than it has had in the recent past. Raw products will stream out of the Anatolian lands and manufactured products will stream in.

The urban region of the Bosphorus is directly dependent on the land traffic which is trans-shipped at the shores of the Bosphorus, and on the sea traffic which is carried over its waters. The suburban region which supplies food to the city is indirectly dependent on the same factors. Both areas will prosper if given an opportunity to develop in an era of peace. The sad and vigorous wars which have raged in the region for the last century or more have prevented any marked development along more progressive lines. But with peaceful conditions, better docking facilities can be erected, better conditions can be created in the harbor, and better farms and fisheries can be maintained. Progressive improvements and developments of commercial and industrial nature are in operation today, even tho the region has been at peace for less than a decade. Continued peaceful opportunity will be attended by continued progress for the region has fine commercial resources.

ONE-CYCLE OR TWO-CYCLE GEOGRAPHY*

HELEN M. KOPF
Piqua Public Schools
Piqua, Ohio

In no subject of the curriculum have there been such sweeping changes in content and in methods of presentation as in the subject of geography. It is a far cry indeed from the formal lessons that were memorized and even sung by our grandparents to our modern problem lessons. The old geography was a memorizing study like a catechism. It was locational, descriptive, and factual. Its lessons were nothing but tests of questions and answers; it asked the questions "what" and "where," its content was stated in briefest language and these early textbooks had no illustrations. The methods followed were not the kind to make children love geography or love school. The next generation of students in geography enjoyed the benefit of a decided advance over the previous one; "why" and "wherefore" became the important questions and physiography was stressed. An outstanding text of this period was called the *Natural Geography*. Typical questions asked in this period were as follows: Why is the coast of Norway characterized by so many deep bays and inlets? Why is the North Star or Polaris invisible to people living south of the equator? Why do we find so many important cities from 50 to 100 miles distant from the Atlantic coast?

MAN AND HIS ENVIRONMENT

The last stage of development and the one which is seen in the period we are now passing thru makes geography more a study of man than a study of his environment. Today man is learning to control his environment for his pleasure. How has man's life been influenced by the environment in which he lives? How do plants, animals and particularly people try to adjust themselves to the part of the world in which they live? How has man changed factors of his environment to help him solve problems of living? As a science, geography still touches all the field of human knowledge. It is the subject where all sciences meet, but in its truest sense the nature of geography is that of relationship: relations between the organic and inorganic world. It is the broadest of all fields with a content as wide as the earth itself and all living creatures residing on it.

* Presented before the geography section at the Eleventh Ohio State Conference, April 10, 1931.

Problems of Content and Method

The methods and processes involved in the learning of any subject are difficult enough when one knows just what should be learned, but the difficulties are augmented many times when there is any uncertainty about what is to be learned. The field of world geography is so wide, and the emphasis has been placed on so many different objectives, that with all the advances that have been made, specialists in the field of geography yet differ greatly both about the matter of the content and about methods of teaching geography.

Conflict Between Two Maxims

In considering the content, we have one school of geographers who state we should follow the pedagogic maxim of "from the known to the unknown" and begin with the local or home geography. Another school of thinkers in the geographic field, holding to another pedagogic maxim, from the simple to the complex, believe we should first take up the study of people living simple primitive lives on some part of the globe and later take up the complex life of our own locality and civilization, so that our pupils may make the contrast, and better appreciate the present. They believe present-day life in the home community is far too complicated to be understood by the average young child.

Two Different Views of Organization

Then again we have two different views about the course or curriculum in geography. One group maintains that a one-cycle presentation of geography should be made. Another group holds to the view that a two-cycle series or course should be followed. The first course of the two-cycle should be given in the fourth and fifth grades in a brief, concise way, but planned to cover the whole field, and then to be followed in the sixth and later grades by a more advanced study of the same materials, but in much greater detail.

This first group affirms that only one cycle of world geography should be studied, and that whatever field one may study, it should be done completely and thoroly without any expectation of returning to it again. At various times in the history of geography study, the one-cycle or the two-cycle series has been popular. Just now the pendulum seems to be swinging towards the one-cycle. This is revealed in the fact that in the past five years several of our large publishing houses have brought out editions of one-cycle geographies.

APPARENT DRIFT TO ONE-CYCLE COURSE

Let us look for an explanation of this apparent drift to the one-cycle course. It may be possible that we may find it in a psychological study of our problem. The best single guarantee of a good approach to real learning in any field is found in the deep direct interest in the work at hand. Just such an interest as children have in play. This interest is the motive power for learning, as steam is the motive power for manufacturing.

Broad general aims as are given in the first books of a two-cycle series usually fail to generate interest and enthusiasm. It is the concrete, the personal details that arouse interest in the young and even older people.

Another weakness of the elementary course in a two-cycle series is that it presents too largely mere geographical facts. There is no time even if there were the disposition to delve into the interesting details of how people's lives have been influenced by climate, soils, winds, ocean currents, etc. The fourth and fifth-grade child becomes just a collector of facts with a storehouse of knowledge. But one's knowledge should be turned to some account. Frederick Harrison once said, "Man's business here is to know for the sake of living, not to live for the sake of knowing." Out of the overwhelming mass of possible geographical facts only those which are valuable for explaining why people live where they do, and how the earth affects their living, are worthy of a place in a school geography. The study of most of the facts in geography should be directed toward the solution of the problem of man in relation to his environment.

Then again, in a two-cycle series we have more a logical or mechanical than a psychological arrangement. There is a great waste of time for there are unquestionably many geographic facts which children memorize or learn in a mechanical way for the present need and which have only an immediate use and which fall away as leaves from a tree as soon as the need has disappeared.

A second objection to the two-cycle series is based on the following. If the children's interest and enthusiasm are not aroused in this first study of geographic material when it is new and novel to them, it stands to reason that in review or repetition of the same geographic material, there will be lacking all the joy, enthusiasm, and spontaneity that comes from investigating a new field. The novelty and freshness have been removed so that the pupils have left only the satisfaction of meeting some requirement made by the teacher.

Some teachers have felt that such a plan is wanting in efficiency because of the time wasted in repetition; the elementary book being more general in character, it fails to arouse interest and lacks adaptation to the needs of the younger children, because it fails to give the details of the particular. Another criticism of the old elementary textbook has been its bareness of statement, the text giving as many geographical and historical facts as its pages can present.

Is it not probable that the two-cycle plan came into popular use years ago because the mass of the children never advanced farther than the fifth grade? It seemed advisable then to present a complete course of world geography before children left school. But today the child leaving school before completing the seventh grade is the exception rather than the usual.

Let us look on the other side of the question as some teachers have been disturbed by the fear that a single-cycle presentation will result in the omission of much valuable geographical material. With the possible danger of our being guilty of the same offense that we have charged against writers of earlier geographies, namely, of stressing the importance of the amount of material, the facts presented, or the encyclopedic data offered, we thought it advisable to make a comparison in terms of pages and number of topics.

FACTUAL MATERIAL COMPARED

We make this comparison to answer the criticism of the two-cycle advocates who are inclined to believe that a one-cycle series will fall short in the amount of valuable geographical data that a two-cycle series can present. They seem to think that in the fourth and fifth grades there is certain to be a dearth of material. We do not assert that this comparison has any real scientific value, but it does answer the criticism mentioned. We find that in a representative one-cycle series of four books there are 798 pages of material; in a very popular two-cycle series of two books there are 712 pages. The print was similar, the size of the pages were the same, and there were practically the same number of illustrations and maps in each series. A better comparison would be the geographical terms found in the table of contents. In the one-cycle series of four books we found 2,631 topics. In the two-cycle series there were 3,464 topics but of these 863 were a repetition in the second book of what had been found in the first book which indicates that there are only 2,601 different topics in the two-book series. We find a slight repetition in the one-cycle series. Fewer than 300 geographi-

cal terms appear more than once in the one-cycle series. Our natural conclusions from this is that in neither the one or two-cycle series do we find an unusual numerical strength in factual material.

REPETITION IS WASTEFUL

Single-cycle advocates maintain that it is foolish to study all the continents a second time—that the repetition of study of some of these yields comparatively little value. Under the two-cycle plan with its logical and mechanical organization, about the same amount of time was given to each of the continents in each of the two books irrespective of their relation to our own country and our own life.

RESULTS OF A SURVEY

Our next investigation was to determine the relative value of the one or two-cycle series by testing pupils in the Piqua Schools who had studied North America and the same sections of the United States. At the present time we have, in our 5A class, children who have completed the study in the single-cycle course of the following divisions: North America, United States (as a whole), making of maps, Southeastern States, West-Central States and Plateau States. Our 6A pupils have studied these same group of states in the fourth and sixth grade in a two-cycle series. We prepared a list of questions pertaining to this group of states and gave them to all of our 5A and 6A classes. The results of these tests can best be seen by a study of this chart:

Geography Test of Piqua Pupils

	1 Cycle	*2 Cycle*
Score	*5A Grade*	*6A Grade*
95 - 100	1	
90 - 94	5	1
85 - 89	10	2
80 - 84	6	8
75 - 79	6	16
70 - 74	15	11
65 - 69	15	14
60 - 64	21	22
55 - 59	13	20
50 - 54	11	14
45 - 49	9	10
40 - 44	11	7
35 - 39	9	3
30 - 34	3	2
25 - 29	2	1
TOTAL	137	131

It will be observed that the mid-score for each grade was 61, which was rather a surprising result. This sampling may not be of sufficient size to justify any definite conclusion. There were 137 pupils in the 5A class and 131 in the 6A class. They were from the same families and school districts of the city. Apparently they were children of the same comparative general intelligence. Some of these children in each group had superior advantages because of their home environment while others were deficient in this respect. But the distinct groups embraced children of about the same experience.

Perhaps we should also state that for the single-cycle group, it was the first use of this particular textbook. Teachers of the two-cycle group had taught the text numerous times and naturally would be better qualified for instruction. We believe the results of the test demonstrated as a whole, that very satisfactory results will follow the introduction of a single-cycle course in geography.

It will be noticed that the seventy-fifth per centile of the 5A was 73.5, of the 6A was 69.7 while the twenty-fifth per centile of the 5A was 46.02 and the 6A was 56.9. It would seem that this table does prove that in the matter of factual geographical knowledge, one-cycle students are as well informed as are those who have taken the subject twice. It would also seem that the brighter students need less the repetition of the two-cycle course. In the lower quartile we find the two-cycle pupils making higher grades which would lead us to believe that the repetition of the material proved advantageous to the slower pupils.

Need of Scientific Research

For many years teachers of geography have been dissatisfied with results accomplished in teaching geography. Changing from the two-cycle to the one-cycle plan of presentation may not relieve this discontent. Investigations should be made on a broader scale than it has been possible for us to follow to determine the relative value of the two plans. We believe we have pointed out the way of making such a survey but not until an extensive comparison of the two methods is made will we know the relative value of the one or two-cycle methods. Until this is done educators will follow the usual practice of relying on *a priori* judgments. The writer of this report hopes that she has developed sufficient interest to produce a worth-while investigation along scientific lines.

FLOODS OF CHINA, A NATIONAL DISASTER

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American Consul, Hankow, China

The floods that swept thru the central part of China last summer, coursing down the Yangtze and Hwai river valleys, caught the population of those areas unawares. The people were unprepared, in the sense that the system of dikes was in poor repair, thus often not affording the theoretical protection that should have been given until the flood waters reached the crests of the various embankments; unprepared, too, because the country, impoverished by two decades of civil strife, lacks the margin of economic strength necessary to cope fully with such a crisis.

The height to which the water rose was hardly to have been anticipated; 53.65 feet above the so-called "zero" of low-water level, when the highest recorded previous mark was 50.5 feet, is not a figure that would have been predicted by the most pessimistic of the "old-timers." Even when the water had climbed up out of its channel and over the bund that protects Hankow and each day crept higher on the buildings in the streets, the predictions were always that "tomorrow" the drop would begin. This happy optimism took graphic form in the French Concession where the authorities installed pumps in order to pump their area dry as the Japanese had done. But each morning they were forced to raise higher their barricades in their effort to keep up to the rising water so that pumping operations could actually begin. They finally won a couple of days' success—and then the river surged up and over all the barriers men had built against it.

But the Chinese did not attempt such measures. They understood that the Dragon King, Ruler of the River, was displeased with the destruction of his temple that had taken place some time previously in the city, and would take toll despite all the puny efforts toward protection. About the time the flood was at its height, the Buddhist priests forecast the complete submergence of the Wuhan* cities—and all who could of the Chinese population evacuated the place, going anywhere that didn't seem to have Wuhan's curse hanging over it.

* The group of three cities at the junction of the Yangtze and Han rivers, viz., Hankow, Wuchang, Hanyang.

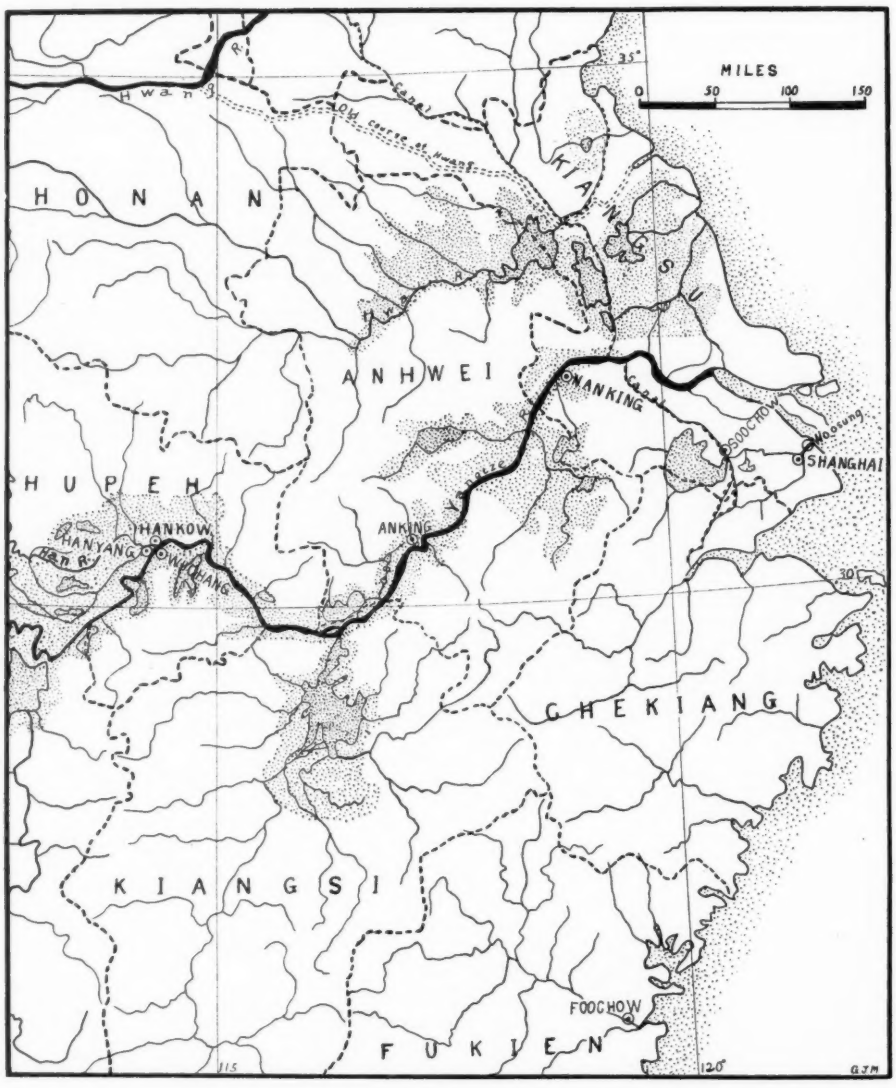

FIG. 1. Sketch map showing principal rivers in eastern China and approximate area flooded in August, 1931. (The flooded area extended more than fifty miles farther west than is shown on the map, and included a total of about 42,000 square miles exclusive of lake areas. The flooded area is as large as Tennessee and larger than Ohio. The flood-area data are from a map prepared for the National Flood Relief Commission. Editor)

A REGION OF BARE SUBSISTENCE FOR MILLIONS

The area struck by the disaster comprises the rich low-lying alluvial plain of the lower-river basins of the Yangtze and the Hwai. Its productive capacity is adequate for only a bare subsistence for most of its dense population. In that area there live 150,000,000 people, and of these some 50,000,000 were affected in varying degrees by the floods. These teeming millions were living there on their tiny plots of land in their squat mud-hut villages, scratching carefully in the soil for every bit of living it could give them—men being so many and the rice grains so few!—and wishing that this year the harvest might be good.

FIG. 2. A part of the flooded city of Hankow.

SCENES AMONG THE REFUGEES

Hoping that the worst would not come—that the dikes would not break and the River not overflow them—the people stayed at their homes until the last. The floods began in the latter part of June, when the heavy rains of summer began washing away railway embankments and flooding fields of growing grain. The rains continued, and by the middle of July dikes began to break at various places in Hupeh Province along the Yangtze River.

FIG. 3. A street scene as the flood began to spread over the city area.

With the breaking of the dams that protected them, the people

were compelled to flee for the highest spot of ground that was nearby, and they always took with them whatever part of their miserable belongings they could carry. On the places of refuge, in the midst of the surging of taut-nerved people, were piled tubs and rough furniture, straw matting and iron cooking utensils, scraps of meat, fly-dotted rice drying in the sun, coffins of the dead, thin bristly swine and mangy dogs, with occasionally a sodden book (perhaps Confucius), a chicken, or a buffalo. Down below —not far below—was the sullen flood. Into that flood as long as possible, they went back by boat, tub, or raft, in an attempt to salvage more household goods which represented all they had in the world—the little store of belongings that just set them apart from beggary. In the congestion and tense situation the refugees would shriek at each other and quarrel bitterly. This is a people noted for its power of suffering—for it has suffered so much— but here and there one came upon those who were weeping. They have suffered so much!

FIG. 4. Fleeing from the advancing flood they wade waist deep thru the rising water in the city streets.

People fled from the flood a-foot. The aged of the family were led, or carried by some dutiful son, while small children rode on top of bundles and furniture to safety. Coffins (of which there are always numbers lying about in some districts) were sometimes emptied of the dead and used for boats. But sometimes, with the sudden breaking of dikes,

FIG. 5. Refugees who have gathered at the railway station.

these modes of escape were not enough, and the swirling water rushed on the clustered huts unexpectedly. A few shrieks for help, and then not much was left but sometimes here and there a thatched roof protruding above the surface of the conquering river, with perhaps a man clinging there, or a dog or two. A slower death came to many who had reached a temporary refuge offered by bits of broken dike that persisted for a while after the first onrush of the water, which then rose inexorably and drowned those who had thought to escape.

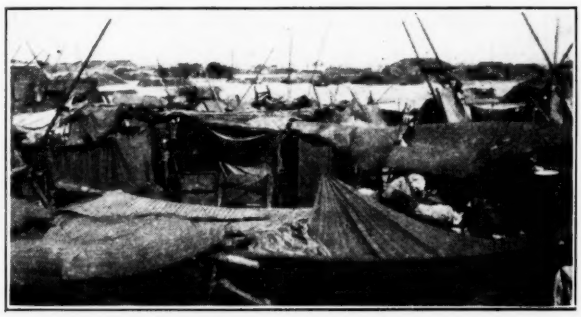

FIG. 6. Refugees concentrated on the railway tracks that have remained above water. Flooded district is in the background.

EXTENT OF THE FLOOD

By the first of August, the Yangtze was completely out of control, and the arrival of the snow-water from the Tibetan plateau kept the flood rising long after the mark of the previous high record had been passed. It was the extraordinary coincidence of heavy rains and snow-water that caused the Yangtze this time to take from the Yellow River the title of "China's Sorrow." The waters rushed turbulently down the basin valley, filled now with the grass that would have ripened into the good rice, with the roofs of the peasants' mud houses, and with the mingled wreckage of the material life of millions of people. Now and then came the bodies of beasts, and of men. The flood devastated the richest sections of the provinces of Hupeh, Hunan, Kiangsi, and Anhui, with the peak of the water-rise occurring at Hankow on August 19. The crops of rice, beans, wheat, sesame, and cotton, have possibly been destroyed by as much as one-half. The capital destruction was enormous, reducing to acute need many of those Chinese who always live on the borderline of minimum subsistence, or below. The entire economic life of the region was crippled severely.

But this was not the end. When the Yangtze was reaching the crest of its rise, the Hwai River to the north of it, swollen by the continuous rains that had been general over south and central China since late spring, also began to overflow its banks, and in a manner that was still more destructive. This was the more calami-

tous flood, so far as human life was concerned, due to that fact that the alluvial plain of the Hwai is as flat as a floor and offers no high points of refuge before the advance of a flood. In contrast the Yangtze River issues from a region of rolling hills only far down toward the sea except where, in Hupeh and Hunan, it weaves its way thru a network of channels in the bed of a prehistoric inland sea. No one knows how many died by drowning in Anhui and Kiangsu from the rampages of the Hwai, but there may have been a million who so lost their lives.

RELIEF MEASURES

Of those who escaped from the grasp of the Yangtze and the Hwai, many were at once faced by the spectre of hunger. Their crops were lost, their means of livelihood gone, and, moreover, often their immediate supply of food was destroyed. Upon philanthropic rich Chinese devolved, to the best of their ability, the task of warding off starvation from the massed destitute in their neighborhood. At first, without coordination, this merely meant the going about in boats to the high land where the refugees had concentrated, or to the houses which they refused to leave as long as they could live in the upper story (if there *were* an upper story), and doling out to them famine rations of food and drinking-water. Upon their appearance in a neighborhood, these boats would be greeted from all sides by the cry of "Mo!" ("I have nothing!").

FIG. 7. Driven from their homes they continue to arrive in boats in their efforts to escape the rising waters.

It was only too visibly evident that they spoke the truth —they had nothing. For a while in Hankow, before the last swelling rise of the water, there was a dry strip of land in the form of the railway embankment, and in that six-mile stretch refugees gathered from all the neighboring districts, until there were over 30,000 crowded together on the rails. There, one saw the meager relief bread (which by no means reached everybody, even in such a population center as Hankow, and there were, and are, millions of destitute in the back-country), supplemented by the bits of food saved from the river—sodden rice drying in the sun, meat scraps black

with the August heat, salvaged beans being roasted in the iron cooking-basin of universal use. But most often there was no reserve supply, however meager, upon which they could draw.

Alongside that track where the thousands had been thrown together, like flotsam, by the flood, the refugees evacuated their feces; with the hot August sun, it is probable that disease would have cut savagely into the massed humanity there—but the Yangtze rose higher still and drove them from the place, some being transported to the hills of Wuchang across the river, some being assimilated by that Hankow population that remained in the upper stories of the city's buildings. Others stayed on, building up shaky structures of poles or living in trees—for were not their homes there in the water, and did they not want to return to them as soon as the water went down?

FIG. 8. Waiting for their meager supply of food all eyes are concentrated on the relief boat.

Organized relief began in Wuhan on August 2, with the distribution each day of some bread and water to the sufferers by the administrative authorities. Mat sheds for shelter began to be erected in Wuchang, where there was dry land and efforts were made to concentrate there, for their better relief, such refugees as were not suspected of Communism. This concentration was only partially successful, however, and many of the destitute of Wuhan still lived in the chill fall weather, in totally inadequate shelters of poles and thin rags.

About the middle of August, the National Government set up a relief organization to cope with what was undoubtedly a national problem. The military campaign against the Communist armies of Kiangsi continued, but an appeal was made to the country for a cessation of the civil war between Nanking and Canton, in the interests of relief. Now, the National Flood Relief Commission is in the midst of its activities in connection with the great problem of feeding, clothing, and sheltering 15,000,000 destitute Chinese. Be-

sides this primary task of the preservation of human life thru the winter months, there is the need of providing some seed for sowing to those peasants who return to their land in the spring-time, if there is to be complete rehabilitation, and a crop next year. Moreover, the broken, intricate, system of dikes must be repaired if there are not to be more floods when the high-water comes again.

THE AFTERMATH

Because of the conditions under which the refugees at present exist, dysentery, exposure, and cholera are taking their toll of life. With the coming of winter, epidemic disease loses the strength of its virulence, but hunger and exposure take ever-increasing numbers of lives. It is not known how many people have lost their lives as the result of the floods, but it seems very possible that in the next few months as many more will die as have died already. And, what effective relief that can be given will be directly proportionate to the amount of peace in China during the critical period. Some time in December or January the flood waters will have receded from the central China plain, and the land will take on much of its former appearance. But the effects of the flood will persist long after that in the life of the people. Social structures, too, are battered and undermined by national calamities, and are never quite the same again.

THE TEACHING OF DIRECTIONS IN SPACE

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All worth-while instruction must be an integral part of the student's life activities. Geography must, first of all, organize and disseminate knowledge concerning the simple yet confusing factors that are a part of everyday life. One of the most elementary contacts of human life has to do with the knowledge of directions both in space and on maps, yet its very universality has served to make it appear trite and retard its complete and definite development.

Based upon the results of an experiment reported in the JOURNAL OF GEOGRAPHY,[1] a remedial program was organized to include three related elements: 1. To produce a clear concept of directions in space. 2. To eliminate local factors in the above concept so that directions under varying circumstances and conditions might be established thru the association with the time of day, the position of the sun, and the casting of shadows. 3. To determine the level at which instruction should begin. Most courses of study recommend the teaching of directions in the third grade and it was desired to discover whether instruction could advantageously begin earlier in the curriculum.

PROCEDURE

In a series of conferences the writer collaborated with nine teachers representing two hundred and seventy-four children in grades, one, two, and three. The procedure outlined was developed simultaneously in all grades with modifications to accommodate vocabulary differences.

The children were taken out of doors in the morning about 8:45 to observe the position of the sun. They were advised that this area was the *eastern* part of the sky. (The seasonal migration of the sun's position makes it obviously a mistake to tell children that the sun rises in the east and sets in the west.) This one simple objective constituted the procedure for the day. It is necessary to stress the point that the children went out of doors and not to the window in a room to observe the sun.

The same process, conducted from a new location, was repeated

[1] George F. Howe, *A Study of Children's Knowledge of Directions*, October, 1931

on the following or a later day, dependent upon weather conditions. Much cloudy weather occasioned lapses of several days as the work advanced and such a situation might profitably lead to a simple study of weather in a third grade.

Upon the mastery of the first skill, the teacher proceeded to the second step which was the converse of the first, i.e., the pupils were asked to state in what part of the sky the sun appeared. Repetition of this reverse presentation was continued until association seemed established between the morning sun and an easterly direction.

Then followed steps three and four whereby the pupils acquired an association between the noon sun and the southern part of the sky. Leaving the schoolroom a few minutes in advance of the usual dismissal (11:30) the positive and reverse skills were built up by a procedure identical with that pertaining to the morning sun. An association between south and east was established by asking the pupils at noon where the sun had been in the morning.

Sufficient interest was aroused to assure the children's carrying on the experiment to include the evening sun at the supper hour. Hence, the fifth and sixth steps associated the late afternoon sun with the western part of the sky and this direction in turn was associated with the others by reviews during the school periods. The command of these simple skills gave a concept of three cardinal points: east, south, and west.

A shadow stick was introduced at this point and by easy gradations more complex skills were developed. The apparatus was constructed of a square foot of board with a thirty-inch stick, either round or not more than an inch square, rising perpendicularly from the center. Such a device can without difficulty be transferred from one point to another to establish the fact that all shadows point in the same exact direction at a given time. It may easily be carried on longer field trips so that establishment of local associations is less probable.

As the study progressed, the shadow stick became the medium for the development of counter directions, i.e., the children learned that when the sun was in the southern part of the sky, the shadow pointed in a northerly direction, and that in an easterly position the sun cast a shadow in a westerly direction. Thus the fourth cardinal point, north, was added to the others to complete the cardinal points of the compass. Reviews fixed the relationship of the points of the compass to one another.

The semi-cardinal points were then given consideration and telephone poles, trees, and the human shadow were substituted for the shadow stick.

This intensive study was conducted thruout a term of ten weeks with a gradual lengthening of the lapse between instruction periods. When such a study embraces a school year, the drill periods may be punctuated by longer and longer periods of quiescence. It is important, however, that instruction be carried on over a long period of time and in varying situations around the school building.

TESTING

At the conclusion of ten weeks each pupil was tested individually both close to and away from the school building. In this case the child was asked to point out various directions in both morning and afternoon so that the complex skills which involve transposition were tested.

It was found that slightly more than fifty per cent of the first grade pupils gave correct answers with an increase to seventy-five and eighty-eight per cent in grades two and three respectively.

Answers to the question as to how the pupil knew he had pointed in a given direction indicated a decided gain over similar answers the previous year. In the latter case such responses as, "Because Santa Claus lives there," "The wind blows that way," and "I don't know" were predominant.

Ninety per cent of the pupils gave reasons which indicated a deduction of direction from the sun's position. This should tend to eliminate the confusion regarding directions which Dr. Ridgley has found existing in adult minds because of faulty teaching and learning techniques.[2] He reports that the direction of the front of a particular schoolroom or the way in which a certain house faced often caused individuals to be unable later to adjust themselves to correct directions in new environments.

CONCLUSIONS

From this survey, then, we may arrive at three inferences:

1. Children can systematically and accurately acquire a clear concept of directions in space.

2. Children can and should be taught directions outside of the classroom in order to exclude the probability of association with local objects. The drill periods should

[2] D. C. Ridgley, *The Teaching of Directions in Space and on Maps.* JOURNAL OF GEOGRAPHY, February, 1922

be undertaken away from as well as near the school building and at varying angles of direction from the latter.

3. Tho it may in some instances be desirable to begin instruction in the latter part of grade two, evidence points to the third grade as the most favorable period of comprehension. If the drill cycle is introduced in September the sun will be nearly east at the beginning of the school day and the varying positions of the morning sun may be followed from the autumnal equinox thru the winter solstice to the vernal equinox and the summer solstice. Periods of rest should be gradually lengthened and the work should continue at intervals thruout the year.

The mastery of this simple skill is of primary importance to all humanity. The motorist, the camper, the aviator, or the most humble commoner must in varying measures be dependent upon knowledge of direction. The ability to orient oneself at home or abroad must surely be potent in some degree upon health, happiness or possibly upon life itself.

RECLAMATION

Parched is the desert,
Hot is the sand,
Seared is the sedgebrush
By Nature's brand;

Barren and silent,
Waiting a plan
Of cooperation
Of God and man.

Profligate waters,
A guiding hand;
Green grows the desert,
Fertile the sand.

Out of a waste place
Lonely and grand,
Springs into being
God's own new land.

ANNA DICK CAMPBELL

THE TEACHING OF RUBBER
(Grade Five)

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I. Aim

To teach the rubber regions of the world and the value of rubber as a world product.

II. Motivation

On a rainy or stormy day ask the class

A. What did you wear to-day?
B. Why did you wear articles made of rubber?
C. How do rubber clothes differ from cotton or woolen wearing apparel?
D. How else is rubber used? Emphasize especially the automobile, electrical, and household uses of rubber.

III. Possible Motivations

A. Interest may be aroused in connection with the lumber industry. The idea often occurs during this discussion that trees are used for other purposes than lumber. It is discovered that rubber comes from trees.
B. There is the possibility of motivation within the class when maple sap or cane sugar are considered. Some one asks whether any other sap is of value. Do other trees produce useful sap?
C. Make a list of rubber uses on the board. It may be kept and used for allied class or group activities.

IV. Visit to Regions of Production

A. Wild Rubber

From grade four they may remember a visit to a rubber tree along the Amazon River in Brazil. If not, show a map of the world.

1. Locate South America.
2. Discuss location of South America with its relation to North America.
3. Determine its zones.
4. Turn to the map of South America.

Review the Zones and locate: Brazil and the Amazon River; Para and Manaos in the Tropical Zone, and on the River.

5. Discuss the climate and rainfall.
6. An imaginary trip up the Amazon River brings out the idea of the tropical jungle.
7. Draw these conclusions as necessary for successful rubber cultivation:
   1) Rich soil
   2) Moist climate
   3) High temperature
8. By pictures obtainable at public libraries, or by magazine photographs or lantern slides, show and explain the difficult process involved in obtaining the hams.
   1) Native tappers—Indians and Negroes
      Type of homes and life
   2) Collection of the sap
      a. Slashing the bark
      b. Gathering contents
   3) Smoking the hams
   4) Difficulties of shipping to Para
   5) Results
      a. Poor method of collection
      b. Careless smoking
      c. Unskilled, uninterested labor
      d. Expensive, slow transportation
      e. Poor grade of rubber

B. Plantation Rubber

1. Review uses of rubber.
2. What industry uses the most rubber? Automobile.
3. What started the great world increase in the use of rubber?
   (Increased use of the automobile and electrical needs. Akron, Ohio—great rubber centre.)
4. What kind of rubber is required for tubes and tires? Perfect.
5. Why isn't wild rubber satisfactory?

Some one may have read of the start in the East Indies. If not tell how the slips were taken from Brazil to Kew

Gardens, London. Then carried to the Malay Peninsula for cultivation and its immediate success. By pictures, slides and maps follow the procedure for wild rubber. In contrast bring out the following:

1) Broad open plantations, well arranged
2) Careful, supervised gathering
3) Large amount of cheap labor—Chinese and Malaysian
4) Ease of transportation to Singapore. Locate at crossroads of the East
5) Control in hands of Great Britain since it controls the areas of production

V. Experiment

At this point to show the plantation method of speeding latex formation, an experiment may be given. A small amount of latex (2 oz.) is poured into a dish. About two tablespoons of ordinary vinegar is added. A thick milky-white mass forms at once. When squeezed, a ball is obtained. Dropped to the floor, it bounces in true rubber fashion. Explain the use of an acid (acetic) on the plantations as the same as is found in vinegar.

VI. Resultant Knowledge

A. Rubber trees require hot, moist climate
B. Rubber regions are chiefly in
   1. Amazon Valley—wild
   2. East Indies and Malay Peninsula—plantation
   3. Central America and Africa—small amounts, wild
C. Rubber ports
   1. Para and Manaos, Brazil
   2. Singapore, Malay States
D. Rubber Market—London
E. United States greatest buyer and user
F. Rubber is one of the leading commercial products of world

VII. Bibliography

For children

F. G. Carpenter, *How We are Clothed*
J. Russell Smith, *Human Geography*

For Teachers

G. V. Southworth, *South America*

Nat. Geog. Mag., "Singapore," March, 1926, "Amazon," April, 1926, "Brazil," Dec., 1930.

JOUR. OF GEOG., Oct., 1920; Dec. 1923.

Central Scientific Co. 79 Amherst St. Cambridge, Mass., for the latex.

VIII. Allied Activities

A. Visit the Hood Rubber Co., Watertown
Samples may usually be obtained upon request

B. Product maps showing location of rubber regions

C. Lists and charts showing uses of rubber

D. Individual reports on the life and contributions of MacIntosh, Goodyear, and Firestone

GROWTH OF THE URBAN CENTERS OF MORE THAN A MILLION POPULATION

As a supplement to the article "Urban Centers of the World," published in the Sept., 1929, issue of the JOURNAL, the following data concerning such centers of over a million people will be of interest. It is based on "Millionenstädte" by Konrad Olbricht in the *Geographischer Anzeiger,* Heft II, No. 32, 1931. The data as to the growth of these large cities are especially interesting. The dates chosen are 1600, shortly before extensive European colonization commenced; 1820, roughly the beginning of the Machine Age on the continent of Europe; 1870, the beginning of the Age of Steel, and extensive railroads.

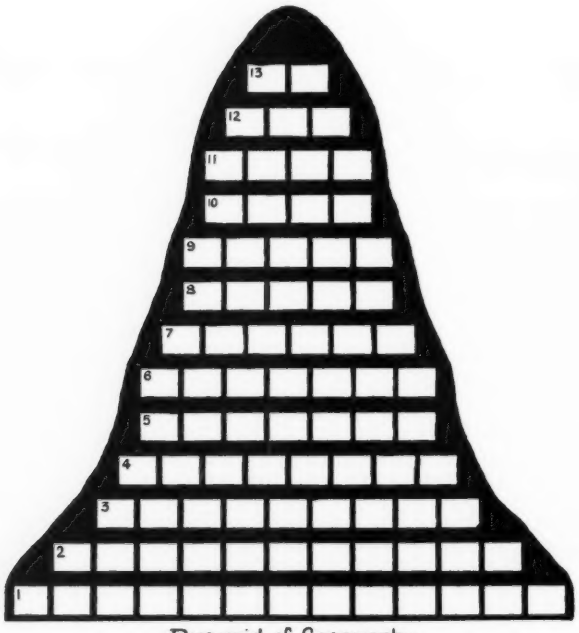
URBAN CENTER, APPROXIMATE POPULATION IN THOUSANDS, IN THE YEARS INDICATED

	1600	*1820*	*1870*	*1930*		*1600*	*1820*	*1870*	*1930*
New York ..	—	150	1,600	9,800	Napoli (Naples) .	200	360	450	1,130
London	60	1,460	3,888	8,400	São Paulo ..	—	30	40	1,100
Paris	90	720	2,200	5,700	Calcutta	—	600	900	1,100
Tokyo	?	?	1,040	5,200	Cairo	200	200	390	1,100
Berlin	8	192	930	4,660	Warsaw ——	8	100	252	1,080
Chicago	—	—	300	3,950	San Francisco	—	166	860	1,080
Shanghai ...	—	—	250	3,000	Montreal ...	—	25	107	1,050
Buenos Aires	—	45	178	3,000	Cleveland ...	—	—	93	1,040
Philadelphia	—	140	700	2,600	Pittsburgh ..	—	7	120	1,020
Osaka	?	150	370	2,500	Nagoya	?	70	130	1,000
Moskva (Moscow)	100	190	610	2,800	Melbourne ..	—	—	194	1,000
Wien (Vienna)	30	264	950	2,050	Canton	?	?	700	1,000
Detroit	—	1	80	1,950	Peiping (Pekin) ..	?	?	1,000	1,000
Rio de Janeiro ...	4	120	420	1,830	Milan	100	130	270	990
Manchester .	2	100	800	1,750	Rome	100	146	245	960
Los Angeles.	—	—	6	1,710	St. Louis ...	—	—	311	993
Hamburg ...	12	132	420	1,620	Mexico	15	150	200	970
Leningrad ..	—	305	660	1,600	Istanbul	300	400	600	590
Boston	—	60	350	1,720	(Istanbul had in 1914 over 1 mill.)				
Hankow-Wuchang .	?	?	?	1,400	Urban centers of Anglo-America ..	—	383	3,500	25,900
Glasgow	6	100	620	1,330	Latin America ..	15	195	840	6,600
Budapest ...	10	75	255	1,300	Europe	500	4,200	13,400	34,100
Liverpool ...	2	95	660	1,290	Asia	?	?	8,000	19,800
Birmingham.	2	100	570	1,280	Earth	?	?	25 Mill.	86 Mill.
Sydney	—	13	94	1,250					
Bombay	—	162	645	1,180					

STEPHEN S. VISHER

INTEREST-STIMULATING DEVICE

The following "Pyramid of Geography" type of puzzle has been very effective in stimulating interest.



-Pyramid of Geography-

1. The sea into which the Nile River flows.
2. A name for the land bebetween the Tigris and Euphrates rivers.
3. The strait between Spain and Africa. It divides the Atlantic Ocean from the Mediterranean Sea.
4. The ocean into which the Congo River flows.
5. Another name for a king in Egypt.
6. A land in France where many flowers grow.
7. The capital city of Greece.
8. One of the chief rivers of France. It flows into the Mediterranean Sea.
9. A large river in Africa. It flows westward.
10. A river in Africa. It flows north.
11. A famous city in Italy.
12. The sea between Arabia and Africa. It is south of the Suez Canal.
13. A large river in the northern part of Italy.

Ardyce Holm
Superior, Wisconsin

NOTICE

Please send your devices to the Editor. We will be pleased to publish more plans that have been found to be helpful. Do not hesitate to send in your devices on the assumption that other people have already sent in theirs, and that yours will be of no volue. These devices are proving of great interest to many teachers, and we would like to have a large number on file. Please write your directions so that they are sufficiently definite for another teacher to follow accurately.

EDITORIAL NOTES AND NEWS

The Committee on Cultural Relations with Latin America will hold its seventh annual Seminar in Mexico, July 3-23, 1932. The program consists of morning lectures on the cultural, educational, and economic phases of Mexican life. These are followed by round table discussions. One- and two-day trips to centers of interest are included. A series of optional trips will be arranged at the close of the Seminar. For particulars write to Hubert C. Herring, 112 East 19th St., New York City.

Three half-day sessions of the Southwestern Social Science Association meeting at Dallas, Texas, on March 25-26, had sections devoted to geography. Those presiding were C. J. Bollinger, University of Oklahoma; Edwin Foscue, Southern Methodist University; and William T. Chambers, Stephen F. Austin State Teachers College. Elmer H. Johnson, University of Texas, is the next chairman.

The Ohio Academy of Science announces the organization of a Section of Geography, with Eugene Van Cleef of Ohio State University as Vice-President. The first meeting was held at Ohio Wesleyan University.

The Visual Instruction Division of the State Education Department of the University of the State of New York has two new circulars by A. W. Abrams, Director of the Division: "The Shadow Stick" (Circular 5) and "List of Slides for Fifth Grade Geography, Canada" (Circular Study G5-D). There are suggestions for the use of each slide.

A new port named Moosonee is to be developed by the Ontario Government at the southern end of James Bay, at the northern terminus of the Temiskaming and Ontario Railway which taps the Cobalt and Porcupine mining areas.

The Boston Association of Geography Teachers was recently organized by the geography teachers of Boston. L. O. Packard, Teachers College of the City of Boston, is president. It is hoped that the association will be affiliated with the state organization.

A new political unit has been set up in Asia. It comprises Manchuria and a part of Inner Mongolia. Among the several names given it are Ankuo, Daida, Manchuokuo, and Tatung. An inexpensive desk map of the area, with accompanying data, compiled by the Geographical Institute, Ann Arbor, Michigan, is available from the publishers, Edwards Brothers, Inc., Ann Arbor, Mich.

A medal award for distinction in geographic research in Nemaha County, Nebraska, has been established at the Peru (Nebraska) State Teachers College by Miss Louise Mears of the geography department of the Milwaukee State Teachers College.

Bulletin No. 120—Wisconsin Dairying has a map of the Geographic Regions of Wisconsin as delimited by Loyal Durand, Jr., of the geography department of the University of Wisconsin. A brief description covering the physical and cultural aspects of each of the 22 regions is included. The publication is available from the Wisconsin and United States Departments of Agriculture.

The United States Geology Survey conducts an annual canvass of the mineral production of Alaska and publishes this information in reports available at nominal costs from the Superintendent of Documents, Washington, D.C. Two recently published reports are Bulletin 836-A, The Mineral Industry of Alaska in 1930 and Administrative Report (20 cents); and Bulletin 836-B, Notes on the Geography and Geology of Lituya Bay, Alaska (5 cents).

DR. FRANK J. WRIGHT, Denison University, has been awarded the A. Cressy Morrison Prize in Natural Science for 1931, by the New York Academy of Sciences, for his

recent paper entitled "The Older Appalachians of the South." At present Dr. Wright is in Florida and will continue his studies in the Southern Appalachians in the spring. During his absence his work at Denison is being continued by his colleague, Professor Henry S. Sharp.

DR. H. H. BENNETT, United States Bureau of Chemistry and Soils, has addressed numerous groups recently on the problems of soil conservation, including the annual meeting of the County Agricultural Agents at the University of Wisconsin; annual meeting of Agricultural Workers, Mississippi Agricultural and Mechanical College; and the Asociación de Técnicos Azucareros de Cuba, Havana.

DR. FRANK E. WILLIAMS, University of Pennsylvania, has returned from an extensive trip thru South America. He went by the west coast route and crossing the Andes by way of the Chilean Lake Region, he visited Argentina and Brazil. Thruout his journey he made a special study of various types of industries, visiting many mines, oil fields, and agricultural enterprises.

PROFESSORS JAMES A. MERRILL and LOUISE W. MEARS, State Teachers College, Milwaukee, are the authors of "Wisconsin, a Geographical Reader" published recently for use in the schools of the state.

PROFESSOR DARTHULA WALKER, State Teachers College, Canyon, Texas, was a member of the faculty of the "University Around the World Cruise" for 1930-31.

DR. PRESTON E. JAMES will be in charge of the University of Michigan field camp in Kentucky this summer. About ten days, at the close of the field work, will be devoted to an automobile trip across the Appalachians to Washington.

DR. STEPHEN S. VISHER of the University of Indiana is spending part of the year as a geographer in the Department of State at Washington, D.C.

DR. CLARENCE JONES of Clark University has been lecturing in the University of Porto Rico during a part of the past year.

Geography has been making rapid progress in The College of the City of Detroit in recent years. Graduate work has been extended to include the master's degree in geography, and 670 students took courses in geography in the department during the first semester, 1931-32. Three field courses will be offered during the coming summer. Dr. Stilgenbauer has completed a new population map of the United States to be published soon; Professor Stewart is on leave of absence carrying on the work for his doctorate, and Professor Hudgins and Professor MacLachlan are each completing research studies.

DR. E. L. STEVENSON, Yonkers, New York, has completed his English edition of the Geography of Claudius Ptolemy which is being printed by the New York Public Library.

PROFESSOR P. W. PICKLESIMER, State Teachers College, Greenville, North Carolina, reports that majors in geography must have completed 42 quarter hours, exclusive of method courses, in this field before they are eligible for a bachelor's degree. This requirement becomes effective next fall.

DR. O. E. JENNINGS, University of Pittsburgh, has been conducting for some years, a study of the eastward movement of Presque Isle, near Erie, Pennsylvania, and the relation of this movement to the vegetation. Present data indicate that the peninsula is growing eastward at the rate of about one-half mile a century. One may pass from beaches formed recently, across the fringing dunes, then across the cottonwood sand plain, next the Bearberry heath, then thru white pine woods, and finally, into the red oak forest which now covers the part formed about 400 to 600 years ago. In the latter area are now appearing a few trees of white oak, hemlock, and sugar maple, indicating the approach of the climax type of forest. There also appears to be a succession of animal life societies in harmony with the successively older plant associations.

GEOGRAPHICAL PUBLICATIONS

De Forest Stull and Roy W. Hatch. **Our World Today.** 721 pp. Numerous photos, maps, and grafs. Allyn and Bacon, New York. 1931.

The reviewer was introduced to Our World Today by a junior high school pupil who proudly showed it as a prized possession. Her interest proved to be more than the mere ownership of a new book since, as she was sent off to bed, she surreptitiously carried the book with her and later when her mother went up stairs to see that all was well the daughter was found deeply absorbed in the volume. It is an attractive and an appealing book. A volume of 720 pages is however a ponderous text even for a junior high school pupil, but it covers, in part, the subjects recommended by the Report of the National Council of Geography Teachers for Junior High Schools for the seventh and eighth grades. The treatment of subject matter is general and less stress is placed upon the economic phases of geography emphasized in the Report.

There are not too many books on geography for the junior high school years. The transfer of the seventh and eighth grade treatises to this school with its new organization did not meet with success and a new field was opened to the textbook writer. As their contribution to the newer course of study, Stull and Hatch have elected to present in order the European countries, portions of Asia, Latin America, and the United States. These larger topics are divided into twelve units: Unit I, The British Commonwealth of Nations; Unit II, Africa; Unit III, The Fringe of Europe, and so on. It would appear that twelve units for 720 pages offers space for a rather extended discussion of each, but when one notices that under Unit I there are seven minor topics, The British Isles, The Irish Free State, Canada, Newfoundland, Australia, New Zealand, and India, and under Unit XI, Latin America, there are eleven, it may be concluded that the space allotted to the various countries does not materially differ from other books. The word "unit" as used in the book is synonymous with "large grouping," and it does not appear to be a unit of study and discussion; moreover the use of the word in the text does not in any way, in the opinion of the reviewer, coincide with "the trend of modern pedagogy."

One of the outstanding features of the book is the collection of pictures. While some of the smaller ones have the indistinctness characteristic of such productions, they do however carry a story with them. No careful investigation has been reported concerning textbook pictures but apparently all textbook publishers do not agree with the reviewer that probably one one-half page clear and carefully selected picture is better than four small and somewhat indistinct ones. The maps, particularly the sectional maps, are commendable; attractive, not too crowded and easily usable. The continent maps are less clear. The same base map with too many place names is used for topography and density of population and the resulting maps do not match the sectional maps in clarity and appeal. The climatic maps use the same colors for the various amounts of precipitation as is used for topography and they thereby offer an obstacle to ready map reading.

Altogether the book is a desirable addition to the increasing number of texts for the junior high school and may be accorded a hearty welcome.

ROBERT M. BROWN

Rhode Island College of Education
Providence

Ellsworth Huntington, C. Beverly Benson and Frank M. McMurry. **Living Geography Series.** Macmillan Company. 1932. Book I, **How Countries Differ,** 346 pp. including index, bibliography and statistical tables; 24

full-page colored maps and four double-page plates together with 63 small black-and-white maps. $1.20. Book II, **Why Countries Differ,** 506 pp. including index, bibliography and statistical tables; 38 colored plates, ten of which are double-page in size; 129 black-and-white maps.

It would be surprising if a series of texts collaborated by an outstanding geographer, a statistician and an authority on educational methods did not present much that is new and unique. As the publishers point out, this is neither a one-cycle nor a two-cycle series, altho the whole world is treated in each book. Repetition is avoided by a different method of approach. In Book I the different regions are approached thru historical geography. In Book II the commoner regional approach is used, and physical bases take the place of the historical basis of the first book.

The subject matter is introduced in every case by the clear statement of a distinct problem that has to do with the region taken up. However, the questions are not always worded as well as possible. For instance, the question is asked, "How do soil and climate make cotton king?" Of course, soil and climate do not make cotton king. Similarly we find, "How have geographical conditions forced Germany to become an industrial nation?" Then, the question appears, "How did these states come to have such valuable farm lands?" but the text really answers a sub-head, "Why are these states valuable for farming?" Many questions should be changed so as to set forth more specifically the geographic nature of the development to follow.

Book I, while it is approached by the avenue of historical geography, is not mostly historical. It presents in simple fashion the outstanding items in the geographic personality of each region taken up, leaving a more complete discussion to Book II. Persons objecting to a two-cycle plan might criticize the similarity of materials in the two books, particularly some of the sections dealing with regions outside the United States.

The maps are most carefully made. Most of the maps and statistics of Book I are used also in Book II. The chief criticism of the full-page maps is that there is too much shown, therefore the subjects desired are frequently difficult to find. The handling of hachures in showing surfaces is good, but bolder colors in showing contour would be more effective. In preparing the large, colored "human use" maps, the authors have ventured upon grounds that have proved disastrous to others attempting the same. While an unusually good piece of work has been done in putting the representation of products on the maps, even in these shortcomings of such products-maps is apparent. For instance, the part of Michigan where grapes and apples are grown the most extensively is needed in the map for the *ago* of *Chicago* and so the apple and the bunch of grapes had to be put where production is not very great. Then, the symbol for Detroit's more than a million people prevented the placement there of manufacturing symbols, and thus there are too many symbols near Flint and Jackson and too few at Detroit. The authors should have included a tent to represent recreational activities, which are now recognized among the major businesses, and thus northern Michigan, Wisconsin, and Minnesota would not have been so nearly blank.

The sections of United States are grouped, apparently, for convenience rather than for geographic unity. To most of us it is not pleasing for North Dakota and Ohio to appear in the same region, nor West Virginia to be included in the same group with Louisiana and Florida. However, the subject matter handles the sections in satisfactory regional fashion.

In preparing the material for the series the authors traveled with the purpose in mind of finding why different regions differ from one another. Their travels in this line took them a matter of some 250,000 miles. Their efforts were well rewarded, for thruout the series a high degree of freshness and reality is in evidence.

The space allotment and hence relative emphasis is as follows, the first figures

representing the number of pages devoted to a given subject in Book I and the second figures to the same subject in Book II: World Concept, 34; North America, historical, 58; United States, 61, 174; Rest of North America, 30, 51; South America, 30, 33; Europe, 55, 96; Asia, 31, 62; Africa, 17, 24; Australasia, 9, 14.

WILLIAM J. BERRY

State Teachers College,
Kalamazoo, Mich.

Zoe A. Thralls and Edwin H. Reeder. **Geography in the Elementary School.** 441 pp. Rand McNally & Co., Chicago. 1931.

This book, admirably planned to aid in the better preparation of geography teachers, has for its eleven chapter headings the following pertinent queries: What Is the Modern View of Geography? Why Teach Children Geography? What Interesting Materials Are There for the First Year of Systematic Geography? What Is There of Value and Interest for Children in the Study of the United States and Canada? What Difficulties Are Encountered in the Study of Europe? Why Should the British Commonwealth of Nations Be Studied as a Unit? How May Latin America Be Organized for Teaching? Why Is a Study of Asia Important? Why Is the Title "Darkest Africa" Being Abandoned? What Are the Various Means of Organizing Geographic Materials for Institutional Purposes? What Tools and Materials Are Essential in Geography Instruction?

The rather elaborate 25-page index gives space emphasis to agriculture, climate, geography, history, maps, materials, minerals, pictures, problems, surface, transportation and United States.

The book was written for teachers in service, teachers in training, and instructors in teacher training institutions, all of whom, we quite properly are told, have problems, fundamentally the same. The authors, having long recognized the futility of training teachers on either subject matter or method alone, have embodied the results of twelve years of work in teacher training institutions in their clever synthesis of material and procedure.

In chapters three to nine, inclusive, covering most of the inhabited areas of the world, material is arranged first for adults, and this is followed by an organization for use with grade school children. Most of these chapters, without being monotonously similar, have further sections of "Outcomes," "Tests and Reviews," "Activities and Problems," and "References and Materials." The first two of these refer primarily to children but the second pair are designed for the teacher, or prospective teacher, using the book. The lists of references alone make the book worth having. For the chapter on the British Commonwealth, the longest list, seven pages are filled with references to books and magazines, for both adults and children, together with a selection of maps.

In this book the viewpoint that "vital geography is a science of relationships" is presented and maintained thruout most of the volume, with a commendable consistency. Both those teaching geography, and those training teachers who later may teach geography, may well examine this book with a view of making it one of their main sources, if not their chief reliance, for material of the sort it so abundantly contains.

GEORGE H. PRIMMER

State Teachers College
Duluth, Minnesota

Alison E. Aitchison and Marguerite Uttley. **North America by Plane and Train.** 398 pp. 19 maps, 6 diagrams, 96 pictures. The Bobbs-Merrill Company, New York, 1931.

This is not just "another reader," for many teachers will find it a source book of much valuable material often wanted but hard to find in a usable form. An illustration

of this fact is the material on the farm systems used in different parts of the continent. This material is interestingly and clearly developed and well illustrated with pictures and diagrams. Teachers will be glad to find in this book that the influences of geographical factors in bringing about specially adapted methods of lumbering in the different forest areas of the continent are made very clear.

A book of this size cannot of course cover all parts in detail so manufacturing and the manufacturing east are barely touched upon.

It is to be regretted that greater care was not taken in proof reading. The most serious error is the mixing up of diagrams and data in the second chapter.

AMY E. WARE

State Normal School
Salem, Mass.

Kent B. Stiles. **Geography and Stamps.** 330 pages, Illustrations and index. Whittlesey House, New York, 1931, $3.00.

Among stamp collectors there are many specialists, but all of them, per se, are students of political geography. The most recent changes in boundaries are expressed postally before they are recorded in the school geographies and atlases, therefore the stamp collector who takes the hobby seriously has an opportunity to keep abreast of the times and observe history in the making.

The first chapter of Geography and Stamps, entitled "The Map Man's Pageant" points out how the postage stamp permits the critical student to read and interpret political developments such as changes in boundaries, colonies surrendered, posts opened to commerce, mandates established, territories annexed, plebiscites held, governments changed, et cetera. All of this is history. But, it is political geography also.

In chapter two under the title "Adventure and Discovery," Mr. Stiles discusses briefly the many explorers who have been honored postally by their native lands as well as by other countries.

The remaining chapters of Part I are devoted to "Countries and Cities and Ports," "That Land is Mine," "Pioneers of the Air" and "Postal Honors to Geographers." In this last chapter the author points out that very few geographers other than explorers have been remembered postally. A portrait of Immanuel Kant adorns the 15 pfennig issued by Germany in 1926. The Royal Roumanian Geographical Society was honored and aided financially by a special issue in 1927 consisting of five semi-postals. In 1925 when the International Geographical Congress assembled in Cairo, Egypt issued three commemorative stamps.

Part II, entitled "The Parade of Nations" and consisting of thirteen chapters, is mainly an annotated gazetteer in which the essential postal facts are set down about every political or geographic unit ever identified with philately. Many of the former stamp issuing countries have long ceased to exist politically, but they are here resurrected to remind us that their postal paper is still extant. This latter portion of the book is a very useful reference and when used with a good atlas should be a most valuable aid to the philatelist and student of geography. No doubt many teachers of geography would find "Geography and Stamps" an interesting and stimulating book, which might assist them in giving their teaching that vital spark which results in learning.

A very commendable feature of the book is the large number of marginal illustrations which effectively illuminate the text and make the book otherwise attractive.

GUY-HAROLD SMITH

Ohio State University

Lucy Sprague Mitchell. **North America.** 383 pp. Numerous drawings and illustrations. The Macmillan Company, N.Y. 1931.

A short review of this admirable book is necessarily inadequate. For scope and organization of subject matter, for method of presentation, for artistic and literary qualities, and for high aim well attained, the book must be read and used to be fully appreciated.

The material is presented in the form of four groups of stories: Roads, Houses, Masters of Animals and Plants, and Gifts from Water and Earth. Each group is followed by a chapter on the geographic element which has dominated these particular stories, and the relation of this element to human needs and human work. Following the four groups of stories is a summarizing chapter, The Land and Its Workers, and a Note to Grown-ups. Good drawings and maps, and poems in prose and in rhyme, adorn and enrich the book. An index, unique in organization and in informational content, closes the presentation.

The material is designed to reach the child of eight or ten thru the medium of the adult. The teacher or parent reads the book to the child, selects which of the four groups of stories best fits the child's environment, starts the child to observe and think in terms of geographic relationships, adds to the content other facts and relationships from first hand excursions, thus putting into the hands of the child the tools he is later to use: maps and diagrams of this book, materials for making other maps and diagrams of his own; the poems, and encouragement to produce original writing along similar lines; the index, by the use of which he makes intelligent comparisons involving particularly the United States, Canada, and Mexico. Grown-ups will welcome this book as fresh and vigorous, stimulating, usable.

Children in the third or fourth grade for whom the book was written, whose first geography book it is, will love the stories, so full of sense and motor appeal. Every story is highly dramatic. The actors are sometimes animals, and what an array the index shows; sometimes children, black or white or deep brown red, from Prince Rupert to Georgia, from Panama to Detroit and Halifax; sometimes grown people from just anywhere. The dramatic control is some feature of the physical environment; it may be grass or tide or fog or storm. Every story is full of motion to catch and hold interest: the moving of a locomotive out of the station, of an airplane above the clouds, of an automobile rolling out of the factory, of the stampede of cattle, of the invasion of a sea of grasshoppers, or the dizzy ride of a polar bear.

Whether for children or grown-ups, the technic is secure. Drama comes first, generalizations follow. Observation precedes reading and both lead to creative activity. Sensing the relationships in the home environment leads to tracing similar relationships in other lands. Correlations abound. The aim—to lead children to observe and think in terms of geographic relationship—is realized.

To whatever of interest and worthwhileness the child's own environment has, the author has added the beautiful atmosphere of this book. Its use is highly commended.

HARRIET SMITH

State Teachers College
Huntsville, Texas

George Godwin. **Vancouver—A Life 1757-1798.** 308 pp., 3 charts, 11 pictures. D. Appleton and Company, New York, 1931.

This biography of Vancouver is not only the story of the man who made much of the first reliable charting of the Pacific coast of North America, but is largely the story of that charting, with which Vancouver was occupied some four years of his life. Besides this material, in which many geographers of this continent have some special concern, there is much of interest to the general reader, and many incidental inclusions of material of geographic value.

Vancouver, native of King's Lynn, Norfolk, was descended from Dutch ancestors (writing the name Van Couver), possibly members of the group invited over to teach dyking to the English. "He was bred with the smell of the North Sea in his nostrils" and geographers in general will perhaps agree with the biographer, that all the "evocative sights, sounds and odours" made of King's Lynn a fitting birthplace for a great seaman.

Vancouver early circumnavigated the globe with Cook, but from his fifteenth till his eighteenth year their voyaging was three times as much as the earth's circumference. He spent a second four years with Cook during which time that master mapped twenty-four miles of coast.

Early in 1791 Vancouver began his period of discovery, in which he gave name to more than two hundred geographical features. Tho his notes refer to river signs at the appropriate place, he failed to find the Columbia River. Neither did he later observe the Fraser coming to the sea thru its delta. However, little else shown by recent surveys is missing from his coast charts. The greater part of this work, one should remember, was done "with equipment that by modern standards would be deemed inadequate for a circumnavigation of the British Isles, with defective diet and crews long since grown weary of their task and miserable condition."

Vancouver's efforts to check the Spanish monopoly in the trade of the sea otter, his notions of future development along the North American coast, his arrangement for the cession of Hawaii to England, and his delight in correcting errors of earlier mappers, are all well portrayed. One even finds interesting his descent from greatness, when thru personal pique, he detailed elsewhere the assistants to the botanist of his expedition, and so temporarily lost to England many of the exotic plants enroute there.

An appendix almost as long as the body of the book contains many copies of documents, letters, and despatches, and seems less valuable from a geographic standpoint. A rear pocket contains copies of charts made by Vancouver. The most significant are those of Hawaii and the coast of "N.W. America."

GEORGE H. PRIMMER

State Teachers College
Duluth, Minnesota